

SWAMP CHESTNUT OAK

Quercus michauxii Nutt.

plant symbol = QUMI

Contributed by: USDA NRCS National Plant Data Center



Robert H. Mohlenbrock
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Alternate Names

basket oak, cow oak

Uses

Wildlife: Swamp chestnut oak acorns are eaten by white-tailed deer, wild hogs, wild turkey, black bear, squirrels, and chipmunks. The acorns are also eaten by cows.

Timber: The wood is used in many kinds of construction; for agricultural implements, wheels, veneer, boards, fence posts, tight cooperage, baskets and fuel.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Quercus michauxii Nutt., swamp chestnut oak, grows along the Atlantic Coastal Plain from New Jersey south to north Florida, and west to east Texas; its range extends up the Mississippi River Valley to Illinois and Ohio.

It is a medium-size to large tree that grows up to over 100 feet tall, with a trunk to over 6 feet in diameter, and a thick, scaly, loose, light-gray bark. The leaves are deciduous, somewhat oval, and 4 to 9 inches long; they are short-pointed at the tip, tapering to rounded at the base, with numerous shallow lobes or rounded teeth along the edges, dark green, smooth above and softly hairy beneath. Leafstalks are 1 inch long. The acorns are large and usually produced singly or in clusters of 2 or 3. There are 85 acorns per pound.

Adaptation and Distribution

Although the species is widely distributed on the best well-drained loamy first-bottom ridges, it is principally found on well-drained silty clay, loamy terraces, and colluvial (rocky deposit) sites in the bottomlands of large and small streams.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Although it is not a prolific sprouter, swamp chestnut oak can vegetatively reproduce by sprouts from roots and stumps. Regeneration from seed is greatly hindered by animal activity. Seed germination takes place soon following seedfall, with literally no period of dormancy. A moist, well-drained loam, covered with a light litter layer, provides an excellent seedbed. It is site sensitivity with growth greatly influenced by soil type and drainage. Acorns may be drilled in rows 8 to 10 inches apart or broadcast and covered with ¼ inch of firmed soil.

In a nursery setting, seedbed densities of 10 to 35 acorns per square foot are recommended. Fall-sown beds should be mulched to protect seeds and seedlings. Partial shade is beneficial for germination. Seedlings are transplanted after the first year.

Management

Swamp chestnut oak is shade intolerant and requires openings for establishment. It normally receives heavy competition from vines, annuals, and brush that are common to most bottomland hardwood sites. When mature, they retard the growth of understory vegetation because they are allelopathic, that is, they exude plant growth inhibitors.

Pests and Potential Problems

Swamp chestnut oak is affected by wood decaying fungi species of *Fomes*, *Polyporus*, and *Stereum*, and sporadically by oak leaf blister (*Taphrina caerulescens*). Acorns are attacked by weevils; insect defoliators like June beetles, orange striped oakworm, fall cankerworm, spring cankerworm, forest tent caterpillar, yellownecked caterpillar, oakleaf caterpillar, and the redhumped oakworm. Borers that attack the species include red oak borer, carpenter worms, Columbian timber beetle, two-lined chestnut borer, tilehorned prionus, oak timberworm. Other pests are golden oak scale, gouty oak gall, horned oak gall, and basswood leafminer.

Cultivars, Improved, and Selected Materials (and area of origin)

Seeds and seedlings are commercially available from forest seed companies.

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS <<http://plants.usda.gov>> and Plant Materials Program Web sites <<http://Plant-Materials.nrcs.usda.gov>>.

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